

WRITE HEAD ALIGNMENT FOR FULL AMPLITUDE TIME-BASED SERVO

ABSTRACT

The invention is directed to a servo writing apparatus having accurate alignment of write gaps of servo write heads. In particular, the write gaps substantially align in a servo channel corresponding to a servo band of a magnetic data storage tape. The servo band is fully magnetized (a.k.a. DC erased) in one direction by a direct current (DC) magnetic field across the write gap of one of the servo write heads. Time-based servo markings magnetized in a second direction are recorded on the fully magnetized servo band by a pulsed magnetic field across the write gap of the other servo write head. The servo write heads may be mounted in a mounting structure within the servo writing apparatus. Maintaining a large mounting structure width to servo write head separation distance ratio improves write gap alignment accuracy, which assures full servo signal strength across the servo band without magnetizing adjacent data bands.